

Listing of the Claims:

The following is a complete listing of all the claims in the application, with an indication of the status of each:

1 Claims 1-3 (Canceled).

1 Claim 4. (Currently Amended) An edge correction apparatus for a
2 digital video camera, comprising:

3 a horizontal edge signal generator and a vertical edge signal
4 generator for respectively generating horizontal and vertical edge
5 correction signals in horizontal and vertical directions of a sensed image
6 obtained via an image sensing element of a digital video camera;

7 a horizontal edge signal gain controller and a vertical edge signal
8 gain controller for controlling gains of the horizontal and vertical edge
9 correction signals respectively from said horizontal edge signal generator
10 and said vertical edge signal generator;

11 an adder for adding the horizontal and vertical edge correction
12 signals whose gains are controlled by said horizontal edge signal gain
13 controller and said vertical edge signal gain controller;

14 a slice processor for adding, to an image processing signal of the
15 digital video camera, an edge correction signal obtained by performing
16 slice processing for and edge signal output from said adder; and
17 a vertical edge component suppression position detector for causing
18 said vertical edge signal gain controller to execute gain control of the
19 vertical edge correction signal in accordance with a horizontal difference
20 signal output from said horizontal edge signal generator,

21 An apparatus according to claim 1, wherein the horizontal
22 difference signal is a signal corresponding to a pixel value less a weighted
23 sum of a luminance difference between horizontally adjacent pixels on
24 opposite horizontal sides of said pixel that is output from said horizontal
25 edge signal generator and a difference between digital video camera CCD
26 output signals vertically adjacent at the same pixel position on opposite

27 vertical sides of said pixel.

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1 Claim 5. (Currently Amended) An edge correction apparatus for a
2 digital video camera, comprising:
3 a horizontal edge signal generator and a vertical edge signal
4 generator for respectively generating horizontal and vertical edge
5 correction signals in horizontal and vertical directions of a sensed image
6 obtained via an image sensing element of a digital video camera;
7 a horizontal edge signal gain controller and a vertical edge signal
8 gain controller for controlling gains of the horizontal and vertical edge
9 correction signals respectively from said horizontal edge signal generator
10 and said vertical edge signal generator;
11 an adder for adding the horizontal and vertical edge correction
12 signals whose gains are controlled by said horizontal edge signal gain
13 controller and said vertical edge signal gain controller;
14 a slice processor for adding, to an image processing signal of the
15 digital video camera, an edge correction signal obtained by performing
16 slice processing for and edge signal output from said adder; and
17 a vertical edge component suppression position detector for causing
18 said vertical edge signal gain controller to execute gain control of the
19 vertical edge correction signal in accordance with a horizontal difference
20 signal output from said horizontal edge signal generator.
21 An apparatus according to claim 1, wherein the horizontal
22 difference signal is a signal corresponding to a pixel value less a weighted
23 sum of an output difference between horizontally adjacent pixels on
24 opposite horizontal sides of said pixel that is output from said horizontal
25 edge signal generator and a difference between digital video camera CCD
26 output signals vertically adjacent ~~at the same pixel position~~ on opposite
27 vertical sides of said pixel.

1 Claim 6. (Currently Amended) An edge correction apparatus for a
2 digital video camera, comprising:

3 a horizontal edge signal generator and a vertical edge signal
4 generator for respectively generating horizontal and vertical edge
5 correction signals in horizontal and vertical directions of a sensed image
6 obtained via an image sensing element of a digital video camera;

7 a horizontal edge signal gain controller and a vertical edge signal
8 gain controller for controlling gains of the horizontal and vertical edge
9 correction signals respectively from said horizontal edge signal generator
10 and said vertical edge signal generator;

Q² 11 an adder for adding the horizontal and vertical edge correction
12 signals whose gains are controlled by said horizontal edge signal gain
13 controller and said vertical edge signal gain controller;

14 a slice processor for adding, to an image processing signal of the
15 digital video camera, an edge correction signal obtained by performing
16 slice processing for and edge signal output from said adder; and

17 a vertical edge component suppression position detector for causing
18 said vertical edge signal gain controller to execute gain control of the
19 vertical edge correction signal in accordance with a horizontal difference
20 signal output from said horizontal edge signal generator.

21 An apparatus according to claim 1, wherein gain control of the
22 vertical edge correction signal by said vertical edge signal gain controller
23 is executed when an amplitude of the horizontal difference signal exceeds
24 a set threshold which is greater than zero.

1 Claim 7. (Currently Amended) An edge correction apparatus for a
2 digital video camera, comprising:

3 a horizontal edge signal generator and a vertical edge signal
4 generator for respectively generating horizontal and vertical edge
5 correction signals in horizontal and vertical directions of a sensed image
6 obtained via an image sensing element of a digital video camera;

7 a horizontal edge signal gain controller and a vertical edge signal
8 gain controller for controlling gains of the horizontal and vertical edge
9 correction signals respectively from said horizontal edge signal generator

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10 and said vertical edge signal generator;
11 an adder for adding the horizontal and vertical edge correction
12 signals whose gains are controlled by said horizontal edge signal gain
13 controller and said vertical edge signal gain controller;
14 a slice processor for adding, to an image processing signal of the
15 digital video camera, an edge correction signal obtained by performing
16 slice processing for and edge signal output from said adder; and
17 a vertical edge component suppression position detector for causing
18 said vertical edge signal gain controller to execute gain control of the
19 vertical edge correction signal in accordance with a horizontal difference
20 signal output from said horizontal edge signal generator, wherein the
21 horizontal difference signal is a signal corresponding to a luminance
22 difference between horizontally adjacent pixels that is output from said
23 horizontal edge signal generator and,
24 An apparatus according to claim 2, wherein gain control of the
25 vertical edge correction signal by said vertical edge signal gain controller
26 is executed when the luminance difference between horizontally adjacent
27 pixels is not less than a set threshold which is greater than zero.

1 Claim 8. (Currently Amended) An edge correction apparatus for a
2 digital video camera, comprising:
3 a horizontal edge signal generator and a vertical edge signal
4 generator for respectively generating horizontal and vertical edge
5 correction signals in horizontal and vertical directions of a sensed image
6 obtained via an image sensing element of a digital video camera;
7 a horizontal edge signal gain controller and a vertical edge signal
8 gain controller for controlling gains of the horizontal and vertical edge
9 correction signals respectively from said horizontal edge signal generator
10 and said vertical edge signal generator;
11 an adder for adding the horizontal and vertical edge correction
12 signals whose gains are controlled by said horizontal edge signal gain
13 controller and said vertical edge signal gain controller;

14 a slice processor for adding, to an image processing signal of the
15 digital video camera, an edge correction signal obtained by performing
16 slice processing for and edge signal output from said adder; and
17 a vertical edge component suppression position detector for causing
18 said vertical edge signal gain controller to execute gain control of the
19 vertical edge correction signal in accordance with a horizontal difference
20 signal output from said horizontal edge signal generator, wherein the
21 horizontal difference signal is a signal corresponding to an output
22 difference in green signal between horizontally adjacent pixels that is
23 output from said horizontal edge signal generator and,

Q 2 24 An apparatus according to claim 3, wherein gain control of the
25 vertical edge correction signal by said vertical edge signal gain controller
26 is executed when the output difference in green signal between
27 horizontally adjacent pixels is not less than a set threshold which is greater
28 than zero.

1 Claim 9. (Original) An apparatus according to claim 4, wherein
2 gain control of the vertical edge correction signal by said vertical edge
3 signal gain controller is executed when the luminance difference between
4 horizontally adjacent pixels is not less than a set threshold, and outputs of
5 vertically adjacent digital video camera CCD output signals are not more
6 than a set threshold.

1 Claim 10. (Original) An apparatus according to claim 5, wherein
2 gain control of the vertical edge correction signal by said vertical edge
3 signal gain controller is executed when the output difference in green
4 signal between horizontally adjacent pixels is not less than a set threshold,
5 and the difference between the vertically adjacent digital video camera
6 CCD output signals is not more than the set threshold.
